

1638

CRFI



ENTERED

1600

 1122
 1122
 1122

RAW SEQUENCE LISTING

DATE: 07/25/2002

PATENT APPLICATION: US/09/359,026C

TIME: 06:30:24

Input Set : N:\Crif3\Datahold\EFS\09359026\Tobin_Sugano.ST25.txt

Output Set: N:\CRF3\07252002\I359026C.raw

RECEIVED

JUL 26 2002

TECH CENTER 1600/2900

```

3 <110> APPLICANT: Tobin, Elaine
4     Tobin, Elaine M
5     Sugano, Shoji
7 <120> TITLE OF INVENTION: Regulation of Circadian Rhythm and Flowering
9 <130> FILE REFERENCE: 13054.0200/UC99-253-2
11 <140> CURRENT APPLICATION NUMBER: 09/359,026C
12 <141> CURRENT FILING DATE: 1999-07-22
14 <150> PRIOR APPLICATION NUMBER: 60/094,072
15 <151> PRIOR FILING DATE: 1998-07-24
17 <160> NUMBER OF SEQ ID NOS: 11
19 <170> SOFTWARE: PatentIn version 3.1
21 <210> SEQ ID NO: 1
22 <211> LENGTH: 1080
23 <212> TYPE: DNA
24 <213> ORGANISM: Arabidopsis thaliana
26 <400> SEQUENCE: 1
27 gtcgaccac gcgtccgaga agaaaaccct agatttctcc gtctctctaa tttcctttct      60
29 ctctcaagct tctcagaaag tctgacactt tcgagaatct aatctccaaa tttcttgtct      120
31 ttttgagaa ggaatcgaat tatgtacaag gaacgtagtg gaggaggtgg tgggtgggtca      180
33 tcgagatcag agatcctcgg tggagctatt gatcggaac gaatcaacga tgcactcaat      240
35 aagaaactag agaaatcttc aacttccacc accacatcta ggggttttctc ttctaaagac      300
37 aaagatccct tttccttcac atctactaaa actcagcttc ctgatgtgga atcggaact      360
39 gatagtgaag ggtctgatgt gagtggatcg gagggtagtg atacgtcgtg gatctcttgg      420
41 ttttgtaatt tgagagggaa tgatttcttc tgtgaagtcg atgaagatta tattcaagat      480
43 gatttcaatc tttgtggttt aagtgggtcaa gtcccttact atgattatgc acttgatctc      540
45 attttagatg ttgatgcttc caacagtgag atgtttactg atgaacagca tgaatgggtg      600
47 gaatcagctg ctgagatgct atatggtctt attcatgttc gttacatttt gactactaaa      660
49 ggaatggctg caatgactga gaagtacaag aactgtgatt tcgggagatg cccgagagtt      720
51 ttctgttgcg gtcagtcttg tcttccagtt ggacaatccg atatcccag atcgagtact      780
53 gtgaagatat actgccctaa atgcgaggat atatcttacc cgcgatctaa attccaaggc      840
55 aatattgatg gagcgtactt tggaaccaca ttcctcact tgttcttgat gacttacggg      900
57 aacttaaaagc cgcagaagcc tactcaaaagc tatgtcccaa aaatctttgg cttcaaggta      960
59 caciaaacat gatactagtg ctctgcattc tcaatggtga tacatttagt ggcctctgtaa      1020
61 ttgcatccgg atgagcaact gaaacgatag ctgcggtgac tggagcatac atcaaccatt      1080
64 <210> SEQ ID NO: 2
65 <211> LENGTH: 276
66 <212> TYPE: PRT
67 <213> ORGANISM: Arabidopsis thaliana
69 <400> SEQUENCE: 2
71 Met Tyr Lys Glu Arg Ser Gly Gly Gly Gly Gly Gly Ser Ser Arg Ser
72 1           5           10           15
75 Glu Ile Leu Gly Gly Ala Ile Asp Arg Lys Arg Ile Asn Asp Ala Leu
76           20           25           30

```

RAW SEQUENCE LISTING

DATE: 07/25/2002

PATENT APPLICATION: US/09/359,026C

TIME: 06:30:24

Input Set : N:\Crf3\Datahold\EFS\09359026\Tobin_Sugano.ST25.txt

Output Set: N:\CRF3\07252002\I359026C.raw

```

79 Asn Lys Lys Leu Glu Lys Ser Ser Thr Ser Thr Thr Thr Ser Arg Val
80      35              40              45
83 Phe Ser Ser Lys Asp Lys Asp Pro Phe Ser Phe Thr Ser Thr Lys Thr
84      50              55              60
87 Gln Leu Pro Asp Val Glu Ser Glu Thr Asp Ser Glu Gly Ser Asp Val
88 65              70              75              80
91 Ser Gly Ser Glu Gly Asp Asp Thr Ser Trp Ile Ser Trp Phe Cys Asn
92      85              90              95
95 Leu Arg Gly Asn Asp Phe Phe Cys Glu Val Asp Glu Asp Tyr Ile Gln
96      100             105             110
99 Asp Asp Phe Asn Leu Cys Gly Leu Ser Gly Gln Val Pro Tyr Tyr Asp
100     115             120             125
103 Tyr Ala Leu Asp Leu Ile Leu Asp Val Asp Ala Ser Asn Ser Glu Met
104     130             135             140
107 Phe Thr Asp Glu Gln His Glu Met Val Glu Ser Ala Ala Glu Met Leu
108 145             150             155             160
111 Tyr Gly Leu Ile His Val Arg Tyr Ile Leu Thr Thr Lys Gly Met Ala
112     165             170             175
115 Ala Met Thr Glu Lys Tyr Lys Asn Cys Asp Phe Gly Arg Cys Pro Arg
116     180             185             190
119 Val Phe Cys Cys Gly Gln Ser Cys Leu Pro Val Gly Gln Ser Asp Ile
120     195             200             205
123 Pro Arg Ser Ser Thr Val Lys Ile Tyr Cys Pro Lys Cys Glu Asp Ile
124     210             215             220
127 Ser Tyr Pro Arg Ser Lys Phe Gln Gly Asn Ile Asp Gly Ala Tyr Phe
128 225             230             235             240
131 Gly Thr Thr Phe Pro His Leu Phe Leu Met Thr Tyr Gly Asn Leu Lys
132     245             250             255
135 Pro Gln Lys Pro Thr Gln Ser Tyr Val Pro Lys Ile Phe Gly Phe Lys
136     260             265             270
139 Val His Lys Pro
140     275

```

143 <210> SEQ ID NO: 3

144 <211> LENGTH: 32

145 <212> TYPE: PRT

146 <213> ORGANISM: Unknown

148 <220> FEATURE:

149 <223> OTHER INFORMATION: potential metal-binding motif

151 <220> FEATURE:

152 <221> NAME/KEY: MISC_FEATURE

153 <222> LOCATION: (3)..(28)

154 <223> OTHER INFORMATION: X = any amino acid

157 <220> FEATURE:

158 <221> NAME/KEY: MISC_FEATURE

159 <222> LOCATION: (31)..(31)

160 <223> OTHER INFORMATION: X = any amino acid

163 <400> SEQUENCE: 3

```

W--> 165 Cys Pro Xaa Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
166 1              5              10              15

```

RAW SEQUENCE LISTING

DATE: 07/25/2002

PATENT APPLICATION: US/09/359,026C

TIME: 06:30:24

Input Set : N:\Crf3\Datahold\EFS\09359026\Tobin_Sugano.ST25.txt

Output Set: N:\CRF3\07252002\I359026C.raw

```

W--> 169 Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Cys Pro Xaa Cys
      170          20          25          30
173 <210> SEQ ID NO: 4
174 <211> LENGTH: 5
175 <212> TYPE: PRT
176 <213> ORGANISM: Unknown
178 <220> FEATURE:
179 <223> OTHER INFORMATION: conserved autophosphorylation site
181 <400> SEQUENCE: 4
183 Ser Ser Ser Glu Glu
184 1          5
187 <210> SEQ ID NO: 5
188 <211> LENGTH: 6
189 <212> TYPE: PRT
190 <213> ORGANISM: Unknown
192 <220> FEATURE:
193 <223> OTHER INFORMATION: CK2 recognition phosphorylation site
195 <400> SEQUENCE: 5
197 Ser Gly Ser Glu Gly Asp
198 1          5
201 <210> SEQ ID NO: 6
202 <211> LENGTH: 5
203 <212> TYPE: PRT
204 <213> ORGANISM: Unknown
206 <220> FEATURE:
207 <223> OTHER INFORMATION: CK2 recognition phosphorylation site
209 <400> SEQUENCE: 6
211 Ser Glu Gly Asp Asp
212 1          5
215 <210> SEQ ID NO: 7
216 <211> LENGTH: 50
217 <212> TYPE: DNA
218 <213> ORGANISM: Unknown
220 <220> FEATURE:
221 <223> OTHER INFORMATION: c-myc Bgl-II site
223 <400> SEQUENCE: 7
224 aattgagatc tcatggagca aaagcttatc agcgaggagg acttgaacat      50
227 <210> SEQ ID NO: 8
228 <211> LENGTH: 49
229 <212> TYPE: DNA
230 <213> ORGANISM: Unknown
232 <220> FEATURE:
233 <223> OTHER INFORMATION: c-myc Bgl-II site
235 <400> SEQUENCE: 8
236 gtacatgttc aagtcctcct cgctgataag cttttgctcc atgagatct      49
239 <210> SEQ ID NO: 9
240 <211> LENGTH: 24
241 <212> TYPE: DNA
242 <213> ORGANISM: Artificial Sequence

```

RAW SEQUENCE LISTING

DATE: 07/25/2002

PATENT APPLICATION: US/09/359,026C

TIME: 06:30:24

Input Set : N:\Crf3\Datahold\EFS\09359026\Tobin_Sugano.ST25.txt

Output Set: N:\CRF3\07252002\I359026C.raw

244 <220> FEATURE:
245 <223> OTHER INFORMATION: CKB3 primer
247 <400> SEQUENCE: 9
248 acaaggaacg tagtggagga ggtg 24
251 <210> SEQ ID NO: 10
252 <211> LENGTH: 23
253 <212> TYPE: DNA
254 <213> ORGANISM: Artificial Sequence
256 <220> FEATURE:
257 <223> OTHER INFORMATION: CKB3 primer
259 <400> SEQUENCE: 10
260 aaccctagat gtggtggtgg aag 23
263 <210> SEQ ID NO: 11
264 <211> LENGTH: 10
265 <212> TYPE: PRT
266 <213> ORGANISM: Artificial Sequence
268 <220> FEATURE:
269 <223> OTHER INFORMATION: Specific peptide substrate
271 <400> SEQUENCE: 11
273 Arg Arg Arg Asp Asp Asp Ser Asp Asp Asp
274 1 5 10

RAW SEQUENCE LISTING ERROR SUMMARY
PATENT APPLICATION: US/09/359,026C

DATE: 07/25/2002
TIME: 06:30:25

Input Set : N:\Crf3\Datahold\EFS\09359026\Tobin_Sugano.ST25.txt
Output Set: N:\CRF3\07252002\I359026C.raw

Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:3; Xaa Pos. 3,4,5,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24

Seq#:3; Xaa Pos. 25,26,27,28,31

VERIFICATION SUMMARY

DATE: 07/25/2002

PATENT APPLICATION: US/09/359,026C

TIME: 06:30:25

Input Set : N:\Crf3\Datahold\EFS\09359026\Tobin_Sugano.ST25.txt

Output Set: N:\CRF3\07252002\I359026C.raw

L:165 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3 after pos.:0

L:169 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3 after pos.:16